



Elise S. Gornish

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EDUCATION

2013	Ph.D.	Ecology, Florida State University, Tallahassee, FL
2009	M.S.	Ecology, Florida State University, Tallahassee, FL
2006	B.S.	Conservation Biology, Hunter College, New York, NY
2003	B.S.	Business, State University of New York at Buffalo, Buffalo, NY
2003	B.A.	English, State University of New York at Buffalo, Buffalo, NY

EMPLOYMENT

08/2025 – Present	Specialist in Cooperative Extension, University of Arizona
08/2024 – Present	Director, Desert Laboratory on Tumamoc Hill, University of Arizona
09/2023 – 06/2024	Visiting Researcher, CREAM, Universitat Autònoma de Barcelona
08/2021 – 08/2025	Associate Specialist in Cooperative Extension, University of Arizona
05/2017 – 07/2021	Assistant Specialist in Cooperative Extension, University of Arizona
10/2017 – Present	Director, GALS (Girls on outdoor Adventures for Leadership and Science) Arizona
01/2015 – 05/2017	Assistant Specialist in Cooperative Extension, University of California, Davis
05/2013 – 12/2014	Postdoctoral Scholar, University of California, Davis

HONORS AND AWARDS

05/2026	Distinguished Outreach Faculty Award, University of Arizona
04/2026	CALES Research Team Award, University of Arizona
01/2026	US Forest Service Partner Award, Region 3 US Forest Service
04/2024	Distinguished Scholar Award, University of Arizona
02/2024	Palo Verde Award for Urban Forestry Enhancement, AZ Department of Forestry and Fire Management
09/2022	Multistate Effort Partnership Award, USDA-NIFA
06/2022	Woman of Impact Fellow, University of Arizona
04/2022	Cooperative Extension Faculty of the Year, University of Arizona
09/2021	Outstanding Inclusive Environmental Education Program, Arizona Association for Environmental Education
02/2021	Outstanding Young Range Professional, Society for Range Management
07/2020	Early Career Open Science Award, <i>AoB Plants</i>
05/2020	Public Service and Outreach Award, School of Natural Resources and the Environment, University of Arizona

11/2019	Shirley O'Brien Diversity & Inclusion Award, University of Arizona
08/2019 – Present	Early Career Fellow, Ecological Society of America
03/2019	Excellence in Campus-Community Outreach for STEM Diversity Award, University of Arizona, Women in Science and Engineering Program
10/2017 – 06/2018	Fellow, Tucson Public Voices, Women's Foundation of Southern Arizona

RECENT SERVICE AND OUTREACH

Local/State

2023 – Present	Member, Scientific Review Committee, Appleton-Whittell Research Ranch
2023 – 2024	President, Arizona Section of the Society for Range Management
2022 – 2026	Member, Advisory Board, Desert Seed Research Center
2022 – Present	Member, Advisory Board, Rainforest Rising
2020 – Present	Member, Technical Advisory Committee, Gila Watershed Science
2020 – Present	Member, Science Advisory Committee, Working Lands Conservation
2019 – Present	Member, Science Advisory Board, Altar Valley Conservation Alliance
2019 – 2024	Chair, Science Committee, Arizona Section of the Society for Range Management
2018 – 2025	President, Society of Ecological Restoration Southwest Chapter

National/International

2025	Reviewer for NSF Trailblazer grants
2024	Reviewer for NIFA BNRE postdoctoral grants
2022 – 2026	Associate Editor, <i>Restoration Ecology</i>
2019 – 2022	Associate Editor, <i>Elementa</i>
2016 – 2026	Founder and leadership member, Ecological Restoration Section of the Ecological Society of America

University Committees

2026 – Present	Member, Advisory Committee, SW Climate Adaptation Science Center
2025 – 2026	Member, Arizona Institute for Resilience Leadership Team
2025	Reviewer, Internal research grants, University of Arizona
2025	Member, Marley Chair for Rangeland Search, University of Arizona
2021 – 2023	Member, Faculty Search Committee, SNRE Director, University of Arizona
2018 – 2026	Faculty Mentor, Ecological Restoration Club, University of Arizona

Departmental Committees

2026 – Present	Member, Faculty Status Committee
2025 – Present	Member, SNRE SPC Committee
2024 – Present	Chair, Extension and Continuing Education Advisory Committee
2017 – 2023	Member, Extension and Continuing Education Advisory Committee
2017 – 2023	Member, IRB Technical Review Panel

Postdoctoral advisor for

Peter Breslin (2025 – Present); Magda Garbowski (2023 – 2024); Trace Martyn (2020 – 2022); Katherine Hovanes (2020 – 2023); Maowei Liang (2018 – 2019); Max Li (2017 – 2018)

PhD advisor for

Laura Shriver (2026 – Present); Justin Lamb (2025 – Present); Marquel Ann Begay (2019 – Present); Lia Ossanna (2020 – 2024); Sierra Lauman (2019 – 2024); Iris Rodden (2018 – 2021); Hannah Farrell (2017 – 2020); Julea Shaw (2015 – 2020)

MS advisor for

Emily Davis (2025 – Present); Philippa Johnstone (2022 – 2024); Michael Spaeth (2022 – 2024); Gabriela Iñigo (2022 – 2024); Amy Gill (2018 – 2020)

Undergraduate advisor for

Caroline Bailey (2026); Stella Salmon (2025); Aneeya Lowe (2023); Bela Rein (2023); Darrell Begay Jr. (2022); Suvi Birch (2021– 2022); Skylar Zuniga (2020 – 2022); Christopher Melton (2020); Whitney Noel (2019 – 2021); Marci Caballero-Reynolds (2018 – 2020); Albert Kline (2018 – 2019); Amanda Dechen (2016 – 2017); Mitchell Petures (2016 – 2017); Patricia Ambrozio Dos Santos (2015 – 2016)

Qualifying exam committee member for

Fern Bromley (2026 – Present); Cameron Crowder (2024 – 2026); Mercades Martinez (2024 – 2026); Madaline Wallace (2023 – Present); Katerina Sacoman (2023 – 2025); Diana Githu (2023 – 2026); Joona Mikkola (2022 – Present); Elena Graciela Dosamantes (2022 – 2024); Julia Rudolph (2022 – 2023); Natasha Riccio (2022 – 2023); Emilio Aguilar Cubilla (2022 – 2023); Cie’na Schlaefli (2022 – 2023); Ben Yang (2021 – 2023); Natalie Melkonoff (2021 – Present); Wyatt Philabaum (2021 – 2022); Lydia Jennings (2019 – 2020); Jared Williams (2019 – 2021); Ariel Marc Leger (2018 – 2020); Olga Kildisheva (2018 – 2019); Ashlee Simpson (2017 – 2018); Noah Teller (2016 – 2019); Breahna Gillespie (2016 – 2021); Evan Wolf (2015 – 2017); Chhaya Werner (2015 – 2017); Julia Michaels (2016 – 2017); Aubrienne Zamora (2015 – 2017)

SOCIETY MEMBERSHIPS

2015 – Present	Society for Ecological Restoration
2013 – 2026	Society for Range Management
2007 – Present	Ecological Society of America

PUBLICATIONS

Refereed Journal Articles

- (108) Ossanna LQR, Hovanes KA, Lien AM, Baldwin E, Franklin K, **Gornish ES** (Accepted) Precipitation and slope angle moderate associations between native shrubs and invasive buffelgrass (*Pennisetum ciliare*) growth in the Sonoran Desert. *Biological Invasions*
- (107) Yang B, **Gornish ES**, Barberán A (Accepted) From paper to practitioner: Strategies for incorporating soil microorganisms into dryland restoration. *Drylands*
- (106) Neilson J, Lauman S, Fontana C, **Gornish ES** (2026). Impacts of reclamation approaches on

- plant establishment in an arid environment during copper mine revegetation. *Restoration Ecology* e70345
- (105) **Gornish ES**, Ohlert T, Collins S, Munson S. A tale of two networks: Lessons learned from Drought-Net and Restore-Net. *Ecological Restoration* (Accepted)
- (104) Johnstone P, Fehmi J, Mitchell R, **Gornish ES** (2026) Seedballs of varying shapes and additives enhance emergence but not long-term establishment of arid plants. *Restoration Ecology* e70303
- (103) Smith WK, Aguilar CE, Hartmen M, **Gornish ES**, Patron W, Reed S, Derner J, Schulte D, Moore D, Peck D (2025) Grass-cast Southwest: A seasonal rangeland productivity forecast for the southwestern United States. *Drylands* 2: e16
- (102) Young K, Lien A, Hovanes K, **Gornish ES** (2025) *Rangeland Ecology & Management* 103:462-472
- (101) Inigo-Gamiz G, Touceda-Suarez M, Bustamante E, **Gornish ES**, Martinez-Yrizar A, Burquez A, Barberán A (2025) Above and below ground effects on buffelgrass invasion in the Sonoran Desert. *Biological Invasions* 27: 195
- (100) Spaeth M, **Gornish ES**, Funk LJ, Roche LM, Eastburn DJ, Barberán A. Impacts of targeted grazing, controlled burning and strip seeding on soil microbial communities. *Ecological Applications*. Accepted
- (99) Diaz JM, Ellington EH, Lamino P, **Gornish ES**, Romero A, Campos Krauer JM, Acevedo MA, Ubeda AJ, Narina LK. Extension interest assessment: Case study of Hispanic residents of New Mexico. *Journal of Extension* Accepted
- (98) Diaz JM, Ellington EH, Lamino P, **Gornish ES**, Romero A, Campos Krauer JM, Acevedo MA, Ubeda AJ, Narina LK. Extension interest assessment: Case study of Hispanic residents of Arizona. *Journal of Extension* 63:4
- (97) Lauman S, Nielson J, **Gornish ES**. Facilitation by *Baccharis sarothroides* (desert broom) during revegetation of a hard rock mine in southern Arizona, USA. *Environmental Monitoring and Assessment* DOI: 10.1007/s10661-025-13934-6
- (96) Young K, Nevill P, Bishop T, Bilyeu D, Gunnell K, Faist A, Kildisheva O, Garbowski M, **Gornish ES**. (2025) Practitioner tools for addressing knowing-doing gaps in seed-based restoration. *Restoration Ecology* e70043
- (95) Martyn T, Roche LM, Kline A, Miller M, **Gornish ES** (2025) Similar post-drought functional trait response of native and exotic plant species in southwestern Arizona. *Journal of Arid Environments* 229: 105355
- (94) Cheng H, Baldwin E, Ponce A, Lien A, Henry A, **Gornish ES**, Soto J (2025) Wildfire evacuations prompt increased support for wildfire mitigation policies in Pima county, Arizona. *Society and Natural Resources* DOI: 10.1080/08941920.2025.2475503
- (93) Alamenciak T, **Gornish ES**, Murphy S (2025) Dimensions of effective volunteer restoration techniques in North America. *Restoration Ecology* e70028
- (92) Garbowski M, Avi A, Kline A, **Gornish ES** (2025) Dense roots with low specific root length underpin performance of dryland restoration species under two types of drought. *Restoration Ecology* e70021
- (91) Spaeth MK, Miller TE, **Gornish ES**, Barberán A (2025) Soil microbial community diversity varies by coastal dune successional stage. *Journal of Coastal Research* DOI: 10.2112/JCOASTRES-D-24-00059.1
- (90) Huang J, Hu G, Ganjurjav H, Gao Q, Sha Y, Li Z, Ji G, Liu H, He S, Yan J, Wang Y, Xie W,

- Gornish ES** (2025) Converse effects of warming and reclamation on methane uptake in alpine meadows. *Global Ecology and Conservation* e03429
- (89) Hovanes K, Thies S, Baldwin E, Ossanna L, Dosamantes EG, Lien A, **Gornish ES** (2025) Hot child in the city: Drivers of urban buffelgrass presence in Tucson AZ. *Conservation Science and Practice* 2: e13297
- (88) Stackhouse J, Davy J, **Gornish ES** (2025) Efficacy of herbicide control methods for *Baccharis (Baccharis pilularis)* on the north coast of California. *California Agriculture* DOI: 10.3733/001c.129083
- (87) Ganjurjav H, Li M, Han L, Sha Y, Li Z, Han X, Ji G, Wu R, Ma Y, Hu G, **Gornish ES**, Gao Q. Reseeding increased plant biomass production and soil fertility, but not plant species diversity in degraded grasslands in China. *Journal of Environmental Management* 370: 122966
- (86) Diaz JM, Jaramillo PL, Acevedo MA, Krauer JMC, **Gornish ES**, Romero A, Ubeda AJ, Ellington EH. Extension interest assessment: An evaluation of Hispanic residents of Florida. *Journal of Extension*. Accepted
- (85) Ossanna LQR, Gugliermo J, Miller M, Davis R, **Gornish ES** (2024) Dryland rock detention structures increase herbaceous vegetation cover and stabilize shrub cover over 10 years but do not directly affect soil fertility. *Science of the Total Environment* 917: 170194
- (84) Rudolph J, **Gornish ES**, Barberán A (2024) Plant-plant and plant-soil interactions under drought and the presence of invasive buffelgrass (*Cenchrus ciliaris*). *Biological Invasions* 26: 1281-1293
- (83) Romanelli J, Piana M, Klaus V, Brancalion P, Murcia C, Cardou F, Wallace K, Adams C, Martin P, Burton P, Diefenderfer H, **Gornish ES**, Stanturf J, Beyene M, Santos JR, Rodrigues R, Cadotte M. (2023) Convergence and divergence in science and practice of urban and rural forest restoration. *Biological Reviews* 99:295-312
- (82) Wan Z, Ganjurjav H, Gu R, Hu G, **Gornish ES**, Chun X, Zhou H, Gao Q (2023) Changes in plant species dominance maintain community biomass production under warming and precipitation addition in temperate steppe in Inner Mongolia, China. *Agricultural and Forest Meteorology* 341: 109671
- (81) Zuo X, **Gornish ES**, Koerner S, van der Plas F, Wang S, Liang M (2023) Dominant species determine grazing effects on the stability of herbaceous community production at multiple scales in drylands. *Journal of Applied Ecology* 60: 1917-1928
- (80) Lauman ST, Martyn TE, Begay MA, Hovanes K, Rodden I, Ossanna LQR, **Gornish ES** (2023) Youth engagement in ecological restoration. *Restoration Ecology* e13916
- (79) Hovanes K, Lien A, Baldwin E, Li YM, Franklin K, **Gornish ES** (2023) Relationships between local-scale topography and vegetation and invasive C4 perennial bunchgrass (*Pennisetum ciliare*) size and reproduction. *Invasive Plant Science and Management* 16: 38-46
- (78) **Gornish ES**, Campbell C, Svejcar L, Munson S, Vaughn K, Spaeth MK, Yelenik SG, Wilf A, Mitchell G (2023) Functional traits are used in restoration practice: a response to Merchant et al. 2022. *Restoration Ecology* e13880
- (77) Munson SM, Farrell HL, Butterfield BJ, Duniway MC, Faist AM, **Gornish ES**, Havrilla CA, Larios L, Reed SC, Rowe HI, Laushman KM, McCormick ML (2023) Soil surface treatments and precipitation timing determine seedling development across southwestern USA restoration sites. *Ecological Applications* 33: e2834
- (76) **Gornish ES**, Guo J, Porensky L, Perryman B, Leger EA (2023) Pre-fire grazing and

herbicide treatments can affect post-fire vegetation in a Great Basin rangeland. *Ecological Solutions and Evidence* 4: e12215

- (75) Gao Q, Ganjurjav H, Hu G, Xu H, Schwartz MW, **Gornish ES**, Zhu W (2023) Warming diminished the sustainability of primary productivity in global grass- and forb-dominated ecosystems. *Environmental Research Communications* 4: 121006
- (74) Shaw J, **Gornish ES**, Roche LM (2022) Efficacy of strip seeding to restore native grassland plant communities. *Restoration Ecology* 31: e13822
- (73) Ossanna L, **Gornish ES** (2022) Efficacy of labile carbon addition to reduce fast-growing, exotic invasive plants: A review and meta-analysis. *Journal of Applied Ecology* 60: 218-228
- (72) Martyn T, Kwapich C, Kline A, **Gornish ES** (2022) Granivorous ants prefer small and unprotected seeds – Implications for restoration in arid ecosystems. *Restoration Ecology* 31: e13759
- (71) Ganjurjav H, Hu G, Zhang Y, **Gornish ES**, Yu T, Gao Q (2022) Warming tends to decrease ecosystem carbon and water use efficiency in dissimilar ways in an alpine meadow and a cultivated grassland in the Tibetan Plateau. *Agricultural and Forest Meteorology* 323: 109079
- (70) Ganjurjav H, Hu G, **Gornish ES**, Zhang Y, Li Y, Wu H, Yan J, He S, Danjin L, Gao Q (2022) Warming and spring precipitation addition change plant growth pattern but have minor effects on growing season mean gross ecosystem productivity in an alpine meadow. *Science of the Total Environment*. 841: 156712
- (69) Martyn T, Barberán, Blankinship JC, Miller M, Yang B, Kline A, **Gornish ES** (2022) Rock structures improve plant establishment, litter catchment, fungal richness and soil moisture in the first year after installation. *Environmental Management* 70: 134-145
- (68) Nsikani M, Madikizela B, Geerts S, Anderson P, Peer N, **Gornish ES**, Mganga K (2022) UN Decade on ecosystem restoration: key considerations for Africa. *Restoration Ecology* 31: e13699
- (67) Gill A, Oliver JC, Kubby B, Fitting H, **Gornish ES** (2022) Restoring Palmer's agave in a Lehmann lovegrass dominated grassland in Southeastern Arizona. *Restoration Ecology* 30: e13668
- (66) Rao D, Hovanes K, Smith E, Davy J, **Gornish ES** (2022) Russian thistle control in California rangelands over five years. *Invasive Plant Science and Management* 15: 33-40
- (65) Gill A, Fehmi J, **Gornish ES** (2022) Biotic and abiotic factors important for Palmer's agave restoration in Lehmann lovegrass dominated areas. *Ecological Restoration* 40: 36-43
- (64) Yang B, Balazs K, Butterfield B, Laushman K, Munson S, **Gornish ES**, Barberán A (2022) Does restoration of plant diversity trigger concomitant soil microbiome changes in dryland ecosystems? *Journal of Applied Ecology* 59: 560-573*

***One of the top ten cited papers published in the Journal of Applied Ecology**

- (63) Williams JP, **Gornish ES**, Barberán A (2022) Effects of buffelgrass removal and nitrogen addition on soil microbial communities during an extreme drought in the Sonoran Desert. *Restoration Ecology* 30: e13570
- (62) Farrell HL, Funk J, Law D, **Gornish ES** (2021) Impacts of drought and native grass competition on Buffelgrass (*Pennisetum ciliare*). *Biological Invasions* 24: 697-708
- (61) Farrell HL, Fehmi J, **Gornish ES** (2021) The effects of site preparation equal to those of seeding at a dryland restoration site: 6 years of plant community development. *Restoration Ecology* 29: e13482

- (60) **Gornish ES**, McCormick M, Begay M, Nsikani MM (2021) Sharing knowledge to improve ecological restoration outcomes. *Restoration Ecology* e13417
- (59) Zijing L, Liang M, Li Z, Mariotte P, Tong X, Dong L, Zheng Y, Ma W, Zhao L, Wang L, Wen L, Tuvhintogtokh I, **Gornish ES**, Zhenhua D, Liang C, Li F (2021) Plant functional groups mediate the effects of climate and soil actors on species richness and community biomass on the Mongolian Plateau grasslands. *Journal of Plant Ecology* 14: 679-691
- (58) Hu G, Gao Q, Ganjurjav H, Wang Z, Luo W, Wu H, Li Y, Yan Y, **Gornish ES**, Schwartz MW, Wan Y, Li Y (2021) The divergent impact of phenology changing on productivity of alpine grassland to different timing of drought on Tibetan Plateau. *Land Degradation & Development* 109: 1014-1025
- (57) Liang M, Smith NS, Chen J, Wu Y, Guo Z, **Gornish ES**, Liang C (2021) Shifts in plant composition mediate grazing effects on carbon cycling in grasslands. *Journal of Applied Ecology* 58: 518-527
- (56) **Gornish ES**, Ganjurjav H, Liang M, Simonis JL, McClaran MP (2021) Identifying restoration opportunities beneath native mesquite canopies. *Restoration Ecology* 29: e13334
- (55) Ganjurjav H, **Gornish ES**, Hu G, Wu J, Wan Y, Li Y, Gao Q (2021) Phenological changes offset the warming effects on biomass production in an alpine meadow on the Qinghai-Tibetan Plateau. *Journal of Ecology* 109: 1014-1025
- (54) Bean T, Davy J, Kyser G, **Gornish ES** (2021) Integration of grazing and herbicide application to manage Barb Goatgrass (*Aegilops triuncialis* L.) and Medusahead (*Elymus caput medusae* L.) in pasture and rangelands. *California Agriculture* 75: 83-89
- (53) Liang M, Feng X **Gornish ES** (2020) Rainfall pulses mediate long-term plant community dynamics in a semi-arid rangeland. *Journal of Applied Ecology* 58: 708-717
- (52) Farrell H, Léger A, Breed MF, **Gornish ES** (2020) Soil microbes and soil processes in restoration. *Restoration Ecology* 28: S307-S310
- (51) Li M, **Gornish ES** (2020) General attributes and practice of ecological restoration in Arizona and California, USA revealed by restoration stakeholder surveys. *Restoration Ecology* 28: 1296-1307
- (50) Shaw JA, Roche LM, **Gornish ES** (2020) The use of spatially patterned methods for vegetation restoration and management across systems. *Restoration Ecology* 28: 766-775
- (49) Von Holle B, Yelenik S, and **Gornish ES** (2020) Restoration at the landscape scale as a means of mitigation and adaptation to climate change. *Current Landscape Ecology Reports* 5: 85-97
- (48) **Gornish ES**, Rowe J, Franklin K, Barberán A (2020) Buffelgrass invasion and glyphosate effects on desert soil microbiome communities. *Biological Invasions* 22: 2587-2597
- (47) Farrell H, Barberán A, Fehmi J, Danielson R, and **Gornish ES** (2020) Disturbance is more important than seeding or grazing in determining soil microbial communities in a semi-arid grassland. *Restoration Ecology* 28: S335-S343
- (46) Qingzhu G, **Gornish ES**, Schwartz M, Fan W, Ganjurjav H, Zheng H, Yue L (2020) Warming and precipitation addition interact to affect plant spring phenology in alpine meadows on the central Qinghai-Tibetan Plateau. *Agricultural and Forest Meteorology* 287: 107943
- (45) Li YM, Roche LM, **Gornish ES** (2020) Bridging the research-implementation gap in weed management on California rangelands. *Rangeland Ecology & Management* 73: 348-357
- (44) Schohr T, **Gornish ES**, Woodmansee G, Shaw J, Tate KW, Roche LM (2020) Practitioner

- Insights into Weed Management on California's Rangelands and Natural Areas. *Environmental Management* 65: 212-219
- (43) Liang M, **Gornish ES** (2019) Rainfall regulation of grazed grasslands. *Proceedings of the National Academy of Sciences* 116: 23887-23888
- (42) Farrell HL, **Gornish ES** (2019) *Pennisetum ciliaris*: a review of treatment efficacy, competitive traits, and restoration opportunities. *Invasive Plant Science and Management* 12: 203-213
- (41) Ganjurjav H, Zhang Y, **Gornish ES**, Hu G, Li Y, Gao Q (2019) Differential resistance and resilience of functional groups to livestock grazing maintain ecosystem stability in an alpine steppe on the Qinghai-Tibetan Plateau. *Journal of Environmental Management* 251: 109579
- (40) James JJ, Sheley RL, Leger EA, Adler PB, Hardegree SP, **Gornish ES**, and Rinella MJ (2019) Increased soil temperature and decreased precipitation during early life stages constrain grass seedling recruitment in cold desert restoration. *Journal of Ecology* 56: 2609-2619
- (39) **Gornish ES**, Arnold H, and Fehmi J (2019) Review of seed pelletizing strategies for arid land restoration. *Restoration Ecology* 27: 1206-1211
- (38) Liang M, Chen J, **Gornish ES**, Mariotte P and Liang C (2019) Foliar nutrient content mediates effects on species dominance and plant community biomass. *Rangeland Ecology & Management* 72: 899-906
- (37) **Gornish ES**, Shaw J, Gillespie B (2019) Using strip seeding to test how restoration design affects randomness of community assembly. *Restoration Ecology* 27: 1199-1205
- (36) Dechen Silva A, Roche LM, **Gornish ES** (2019) The use of strip-seeding for management of two late-season invasive plants. *Heliyon* 5: e0177cmcm
- (35) Hasbagan H, **Gornish ES**, Qingzhu G, Guozheng H, Yufan W, Yue L, Luobu D (2018) Temperature leads to changes of plant community composition in alpine meadow and steppe on the Qinghai-Tibetan Plateau. *Environmental Monitoring and Assessment* 190:585
- (34) **Gornish ES**, Eastburn D, Roche LM (2018) Livestock grazing and topographic site effects on grassland plant communities after long-term grazing cessation. *The Rangeland Journal* 40: 577-582
- (33) **Gornish ES**, Roche LM (2018) The value of Cooperative Extension for involving society in restoration and conservation. *Restoration Ecology* 26: 1051-1054
- (32) Liang M, Chen J, **Gornish ES**, Bai X, Li Z, Liang C (2018) Grazing effects on grasslands escalated by abnormal precipitation in Inner Mongolia. *Ecology & Evolution* 8: 8187-8196
- (31) **Gornish ES**, Case E, Valle M, Bean TM, Moore-O'Leary KA (2018) A systematic review of management efforts on goatgrass (*Aegilops* spp) dominance. *Plant Ecology* 219: 549-560
- (30) Eastburn DJ, Roche LM, Doran M, Gamble G, and **Gornish ES** (2018) Seeding for multiple ecosystem service goals. *Journal of Environmental Management* 211: 191-197
- (29) Matzek V, **Gornish ES**, Hulvey KB (2017) Emerging approaches to successful ecological restoration: five imperatives to guide innovation. *Restoration Ecology* 25: S110-S113
- (28) Hulvey KD, Ledger E, Porensky LM, Roche LM, Veblen KE, Fund A, Shaw J, **Gornish ES** (2017) Restoration islands: A tool for efficiently restoration dryland ecosystems. *Restoration Ecology* 25: S124-A134
- (27) **Gornish ES**, Roche LM (2017) Cooperative Extension holds the key to unlocking public engagement within science. *Frontiers in Ecology and the Environment* 15: 487-488
- (26) **Gornish ES**, Lennox MR, Lewis D, Tate KW, and Jackson RD (2017) Comparison of herbaceous

- plant response to active and passive riparian restoration in a Mediterranean climate. *PLoS ONE* 12:e0176338
- (25) Davy J, Turri T, Dykier K, **Gornish ES** (2017) Seeded forages in California annual rangeland. *California Agriculture* 15: 487-488
- (24) Ryan WH, **Gornish ES**, Christenson L, Halpren S, Henderson S, LeBuhn G, Miller TE (2017) Initiating & managing long-term data with amateur scientists. *American Biology Teacher* 79: 28-34
- (23) **Gornish ES**, Fierer N, and Barberán A (2016) Associations between an invasive plant (*Taeniatherum caput-medusae*, medusahead) and soil microbial communities. *PLoS ONE* 11: e0163930
- (22) **Gornish ES**, James JJ (2016) The effects of habitat and demography on management outcomes for an invasive annual grass. *Plant Ecology* 217: 1247-1258
- (21) Ganjurjav H, Gao Q, **Gornish ES**, Schwartz M, Liand Y, Cao X, Zhang W, Zhang Y, Li W, Wan Y, Li Y, Danjiu L, Guo H, Lin E (2016) Differential response of alpine steppe and alpine meadow to climate warming in the central Tibetan Plateau. *Agriculture and Forest Meteorology* 23: 233-240
- (20) **Gornish ES**, Brusati E, Johnson D (2016) Practitioner perspectives on using non native plants for revegetation in California. *California Agriculture* 70: 194-199
- (19) **Gornish ES**, Ambrozio dos Santos P (2016) Invasive species cover, soil type and grazing interact to predict long-term grassland restoration success. *Restoration Ecology* 24: 222-229
- (18) **Gornish ES**, James JJ Laca EA (2015) The value of oak woodland habitats as control for Medusahead (*Taeniatherum caput-medusae*). In: Proceedings of the 7th Oak Symposium: Managing Oak Woodlands in a Dynamic Work, November 3-6, 2014, Visalia, CA. USDA Forest Service General Technical Report PSW-GTR-251, 579 p.
- (17) **Gornish ES**, and Leuzinger S (2015) Across the horizon: Scale effects in global change research. *AoB PLANTS* 7:plv079
- (16) Harrison S, **Gornish ES**, and Copeland S. (2015) Climate-driven diversity loss in a grassland community. *Proceedings of the National Academy of Sciences, USA* 112: 8672-8677
- (15) **Gornish ES**, and Miller TE. (2015) Plant community responses to simultaneous change in temperature, nitrogen availability, and invasion. *PLoS ONE* 10: e0123715
- (14) James JJ, **Gornish ES**, DiTomaso JM, Davy J, Doran M, Becchetti T, Wilson R, Lile D, Laca E (2015) Managing medusahead (*Taeniatherum caput-medusae*) on rangeland: A meta analysis of control efforts and assessment of stakeholder needs. *Rangeland Ecology & Management* 68: 215-223
- (13) Monge J, **Gornish ES** (2015) Mechanisms of facilitation on a barrier island. *Journal of Coastal Research* 31: 17-24
- (12) **Gornish ES**, James JJ, Sheley RL, Rinella MJ, Svecar T, Englund SD, Aanderud ZT (2015) Altered snowfall influences early life stage transitions and recruitment of a native and invasive grass in a cold desert. *Oecologia* 177: 595-606
- (11) **Gornish ES** (2014) Interactive effects of global change and invasion across levels of organization in an old field plant community. *AoB PLANTS* 6: plu061
- (10) **Gornish ES** (2014) Demographic effects of warming, elevated soil nitrogen, and native

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- (8) **Gornish ES**, Prather C (2014) Do foliar traits predict how plants respond to warming? A meta analysis. *Journal of Vegetation Science* 25: 919-927
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- (5) **Gornish ES**, Miller TE (2013) Using long-term census data to inform restoration methods of coastal dune vegetation. *Estuaries & Coasts* 36: 1014-1023
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- (2) **Gornish ES** Miller TE (2010) Effects of storm frequency on dune vegetation. *Global Change Biology* 16: 2668-2675
- (1) Miller TE, **Gornish ES**, Buckley H (2010) Climate and coastal dune vegetation: disturbance recovery and succession. *Plant Ecology* 206: 97-104

Other Publications

- (28) Kline A, **Gornish ES** (2026) Arizona native plants seedling identification pocket guide. *University of Arizona Cooperative Extension AZ2190-2026*
- (27) McCormick M, **Gornish ES**, Elko A (2025) Southwest fire regimes: Desert grasslands fact sheet. Southwest Fire Science Consortium
- (26) **Gornish ES** (2025) Exploring the efficacy of silicon products to enhance herbivory protection. *University of Arizona Cooperative Extension AZ2122*
- (25) **Gornish ES**, Shriver L, Corwin R, Havrilla C, Costanzo S, Gehring C (2025) Información de germinación para especies comunes de restauración de Arizona. *University of Arizona Cooperative Extension AZ2076*
- (24) **Gornish ES**. Utilizando plantas nativas para controlar el zacate buffel (2025) *University of Arizona Cooperative Extension AZ1996S-2024*
- (23) **Gornish ES**, Rein B, Blankinship J, Johnstone P, Sanyal D (2024) Soil health perspectives of Arizona rangeland stakeholders. *University of Arizona Cooperative Extension AZ2077*
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- (21) **Gornish ES**, Lauman S, Begay M, Martyn T, Johnstone P, Ossanna L (2023) Restoration Ecology Activity Book. *University of Arizona Cooperative Extension AZ2049*

- (20) Noel W, Sittig J, **Gornish ES** (2023) Chiricahua Leopard Frog management in southern Arizona. *University of Arizona Cooperative Extension AZ2022*
- (19) **Gornish ES**, Johnson S (2022) Identifying restoration opportunities under mesquite canopies. *University of Arizona Cooperative Extension AZ2007*
- (18) **Gornish ES** (2022) Guía de restauración ecológica para niños. ISBN: 979-8844625886
- (17) **Gornish ES** (2022) A kids guide to ecological restoration. ISBN: 979-883496540
- (16) **Gornish ES**, Farrell H, Law D, Funk J (2022) Using native plants to control buffelgrass. *University of Arizona Cooperative Extension AZ1996*
- (15) **Gornish ES**, Simpson A, Caballero-Reynolds M (2021) Una peloteadora de semillas para uso en jardinería y restauración. *University of Arizona Cooperative Extension AZ1785S*
- (14) Mueller P, Mendivil E, Jonas J, Kline A, **Gornish ES** (2021) Seedball design to optimize germination. *University of Arizona Cooperative Extension AZ1937*
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- (12) **Gornish ES**, Shaw J, Farrell H, and Roche LM (2021) Novel approaches to ecological restoration in semi-arid and arid habitats. *University of Arizona Cooperative Extension AZ1934*
- (11) Hall A, **Gornish ES**, and Ruyle G (2020) Poisonous plants on Arizona rangelands. *University of Arizona Cooperative Extension AZ1828*
- (10) **Gornish ES** and Howery L (2020) Non-native, invasive plants of Arizona. *University of Arizona Cooperative Extension AZ1482*
- (9) **Gornish ES** (2019) Seed ball strategies for gardening and restoration in arid landscapes. *University of Arizona Cooperative Extension AZ1797*
- (8) **Gornish ES**, Simpson A, and Caballero-Reynolds M (2018) How to construct a bicycle powered seed pelletizer for use in gardening and restoration. *University of Arizona Cooperative Extension AZ1785*
- (7) **Gornish ES**, Coffey P, Tiles K, and Roche LM (2018) Careers in Cooperative Extension. *Frontiers in Ecology and the Environment* 16: 539-540
- (6) Rao D, **Gornish ES**, Smith R, and Davy J (2017) Progress report: Tumbleweed on California's central coast. *Grasslands* 27: 11-13
- (5) **Gornish ES**, and Shaw J (2017) Restoration manual for annual grassland systems in California. *ANR Publication* 8575 pp. 88
- (4) Bean T, and **Gornish ES** (2016) Native soil bacteria as biocontrol. *Cal-IPC News* 24: 9-14
- (3) **Gornish ES**, and Hulvey KB (2016) New ecological restoration section at ESA! *Ecological Restoration* 34: 87-88
- (2) **Gornish ES** (2015) An extension perspective on California grassland restoration. *Grasslands* 25: 6-8
- (1) **Gornish ES** (2015) 'Do No Harm' to avoid introducing pests in restoration. *Cal-IPC News* 23: 9

MEDIA

Websites/video

- (3) AZ Invasive Plants (2024 – Present) An Arizona Homeowner's guide to identifying and managing invasive plants. ~2000 unique views per month. azinvasiveplants.arizona.edu

- (2) EcoRestore (2021 – Present) Ecological restoration portal for the state of Arizona. Approximately 50 unique views per day. Ecorestore.arizona.edu
- (1) Muller P, Mendivil L, and **Gornish ES** (2020) Seedballs: The movie. <https://www.gornishlab.com/seedballs>

Interviews

- (6) **Gornish ES** (2025) Aridland ecological restoration explained. Carbon Radio on YouTube. <https://www.youtube.com/watch?v=bICPUxFKYw4>
- (5) **Gornish ES** (2024) Science and practical solutions to support ecological restoration. Rain or Shine Podcast Season 5, Episode 13. <https://www.buzzsprout.com/1136681/episodes/16208340>
- (4) **Gornish ES** (2020) 60 second vegetation management tips movie series (12 total). <https://www.gornishlab.com/outreach>
- (3) **Gornish ES** (2019) Seedballs: Giving nature a helping hand by restoring vegetation. UrbanFarmer Podcast #509. <https://www.urbanfarm.org/2020/01/11/509-elise-gornish/>
- (2) **Gornish ES** (2017) Conservation and Ecology. WatchNature Podcast E3: <https://player.fm/series/watch-nature-podcast-1304777/e3-elise-gornish-conservation-ecology-dune>
- (1) **Gornish ES** (2017) Interview about ecological restoration after fire on Public Radio KZYX on the 'Ecology Hour'. <https://www.kzyx.org/programs/ecology-hour#stream/0>

RECENT AWARDED GRANTS (total awarded as PI or Co-PI = 13,141,883 USD)

Federal

- **Gornish ES**. Aridification and the long-term management of Saguaro Cactus. United States Geological Survey, 09/2026 – 08/2028. \$150,000
- **Gornish ES**, Barberán A. Optimizing low-cost soil health technologies for drought resilience on arid rangelands. Southwest Climate Adaptation Science Center, 09/2026 – 08/2028. \$313,645
- Barberán A, **Gornish ES**. The interactive effect of fire and plant invasion on belowground processes and microbiome functions. National Science Foundation, 07/2025 – 06/2028. \$558,676
- Flesch A, **Gornish ES**. Collaborative landscape-scale ecosystem restoration in the Altar Valley. National Fish and Wildlife Foundation, 01/2025 – 12/2028. \$3,560,200
- **Gornish ES**, Wright A, Hall A, Beard J, Lien A. From soil to snout: A workshop series to prepare ranchers and those who train them for drought resilience on southwestern rangelands. NRCS Conservation Technical Assistance, 12/2023 – 11/2025. \$234,498
- **Gornish ES**, Gerson J. GALS Arizona & Michigan: Girls on outdoor Adventure for Leadership and Science in Arizona and Michigan. USDA Women and Minorities in Science, Technology, Engineering and Mathematics, 09/2023 – 08/2025. \$199, 913
- Havrilla C, Gehring, **Gornish ES**, Munson S. Harnessing livestock and microbes to improve rangeland productivity and soil health. Western SARE, 09/2023 – 08/2026. \$304,450
- **Gornish ES**, Talkington N, Mike J, Jensen K, McCormick M, Chief K. Uniting western restoration strategies and indigenous knowledges to build capacity and climate resilience on the Navajo Nation. Climate Adaptation Science Center, 12/2022 – 11/2025. \$223,398

State

- Thode A, Antoninka A, Aslan C, Bowker M, Ghering K, Souther S, Crimmins M, Gornish ES, Lien A, Mitchell R, Albuquerque F. Tackling the “What, When and Where” of advancing

applied solutions for the changing fire regime in the Sonoran Desert. ABOR, 08/2026 – 07/2029. \$2,000,000

- **Gornish ES.** Using native plants to enhance production of chiltepin (*Capsicum annuum var. glabriusculum*). USDA Specialty Crop Block Grant Program, 10/2026 – 09/2028. \$36,207
- Crocker R, Waller M, **Gornish ES.** Tumamoc Rising. CUES Spanning Boundaries Challenge Grant, University of Arizona, 09/2026 – 08/2028. \$100,000.
- **Gornish ES.** Utility of using native plants for buffelgrass control. Department of Forestry and Fire Management, 02/2026 – 01/2028. \$108,000.
- Goldberg D, **Gornish ES.** Integrating culture, natural history, and science: interpretative signage for Tumamoc Hill, a Tucson icon. AZ State Parks Recreational Trails Program for Safety and Environment Education, 12/2025 – 11/2026. \$10,000
- **Gornish ES.** Desert Laboratory at Tumamoc Hill Internship. University of Arizona, Arizona Institute for Resilience, 11/2025 – 07/2026. \$3,390
- **Gornish ES.** Restoration Ecology Lab Internship. University of Arizona, Arizona Institute for Resilience, 05/2025 – 08/2025. \$3,550
- **Gornish ES,** Breslin P. Vertically Integrated Projects Program Catalyst Seed Fund. University of Arizona, 6/2025 – 6/2027. \$3,000
- **Gornish ES,** Johnson M. Indigenous agriculture demonstration garden at Tumamoc Hill. University of Arizona Office of Sustainability, 03/2024 – 06/ 2024. \$10,000
- **Gornish ES.** Free little seed library distribution. Society for Ecological Restoration, Southwest Chapter, 10/2024 – 09/2025. \$2,500
- **Gornish ES.** Exploring the use of silicon for herbivory protection in aridland restoration plants. RII Faculty Seed Grant, University of Arizona, 08/2024 – 08/ 2025. \$14,846
- Halldorson MH, Sanyal D, McReynolds K **Gornish ES.** The effect of warm season cover crops in Arizona vineyard systems. USDA Specialty Crop Block Grant Program, 10/2024 – 09/2026. \$99,431
- **Gornish ES.** Free little seed library distribution. Arizona Native Plant Society, 09/2024 – 08/ 2025. \$1,800

Private Foundation

- **Gornish ES.** Desert Laboratory improvements. Southwestern Foundation for Education and Historical Preservation. 09/2026 – 08/2027, \$27,275
- **Gornish ES.** Tumamoc Resilience garden youth program. H.S. Lopez Foundation. 01/2026 – 01/2027, \$15,000
- **Gornish ES.** Student Research Support. Melinda Cole Foundation. 09/2025 – 08/2030, \$50,000
- Baldwin E, Creigh WF, Adams AD, Franklin K, **Gornish ES.** Invasion, ignition, and restoration: Science, art and education for Sonoran Desert Resilience. University of Arizona Institute for Resilience, 08/2025 – 07/2026. \$98,078
- **Gornish ES.** Desert Laboratory at Tumamoc Hill. University of Arizona Foundation. 05/25 – 04/27. \$100,000
- **Gornish ES.** Raymond M. Turner Postdoctoral Fellowship. University of Arizona Foundation. 01/25 – 12/27. \$200,000
- **Gornish ES.** GALs: Girls on outdoor Adventure for Leadership and Science. Treeline Foundation. 12/23 – 12/25. \$3,333

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